

**REMARKS**

The Examiner has rejected claims 1 through 23 under 35 U.S.C. 103(a) as allegedly being obvious. In view of the above amendments and the following remarks, the Applicant respectfully requests the Examiner to reconsider the pending rejections.

**The Section 103 Rejections**

The Examiner has rejected claims 1 through 4, 7 and 18 through 22 under 35 U.S.C. 103(a) as allegedly being obvious over Takeshi in view of Parrott. The Examiner has rejected claims 5 and 6 as allegedly being unpatentable over Takeshi in view of Parrott and further in view of Fukanuma. The Examiner has rejected claims 8, 10 and 13 as allegedly being unpatentable over Takeshi in view of Parrott and further in view of Ohima. The Examiner has rejected claims 9 and 14 as allegedly being unpatentable over Takeshi in view of Parrott and further in view of Ohima and Kato. The Examiner has rejected claims 11 and 12 as allegedly being unpatentable over Takeshi in view of Parrott and further in view of Ohima and Ikeda. The Examiner has rejected claims 15 and 16 through 22 under 35 U.S.C. 103(a) as allegedly being obvious over Takeshi in view of Parrott. The Examiner has rejected claim 17 under 35 U.S.C. 103(a) as allegedly being obvious over Takeshi.

In view of the above rejections, without agreeing the Examiner's characterization of the disclosures in the cited references, the applicant has clarified the subject matter limitations which have been already recited in independent claims. Independent claims 1 and 19 both explicitly recite "the first passage interconnecting the suction chamber and the first compression chamber, the second passage interconnecting the suction chamber and the second compression chamber" as originally filed. Since both "the first passage" and "the second passage" are "interconnect[ed to] the suction chamber," the "gas" is maintained in the substantially the same pressure as the suction chamber.

Newly amended independent claims 1 and 19 now both explicitly recite “the gas in the first passage and the second passage maintaining substantially the same pressure as in the suction chamber” with respect to the “partition wall” in the “drive shaft.”

As the Examiner has already conceded in Paragraph 3 on page 3 of the pending Office Action, the Takeshi prior art reference fails to teach, disclose a partition wall in the drive shaft.

For the lack of the disclosure in the above cited prior art reference, the Examiner has cited the Parrot reference, which has been already cited in a previous Office Action. The Parrot reference generally relates a “rotary mineral cutting head.” Although Figure 1 of the Parrot reference appears to disclose the two concentric tubes 42 and 43 within the drive shaft 9, “[e]ach tube 42, 43 is connected to a respective supply conduit 45, 46, in turn connected to a pump (not shown)” as specified at lines 26 through 28 in column 6. [emphasis added]. Furthermore, the Parrot reference discloses that “with two concentric tubes extending axially along the hollow shaft to convey water, at two different pressures to the rotary cutting head, a first pressure being for low pressure supply to the piston(s) of the carrier and the second pressure being a higher pressure supply to be conveyed to spray nozzles in the vicinity of the cutter picks” as provided at lines 49 through 55 in column 4. [emphasis also added].

In sharp contrast, “the gas in the first passage and the second passage maintain[s] substantially the same pressure as in the suction chamber” as explicitly called for by newly amended independent claims 1 and 19. The Parrot reference thus fails to teach, disclose and suggest “the substantially same pressure” in the refrigerant gas.

Furthermore, the water as conveyed by the two concentric tubes 42 and 43 in the Parrot reference has purposes that are totally different from that of the “gas” as called for

by the newly amended independent claims of the current invention. The water never gets compressed and is used for suppressing dust or water-jet cutting as described at lines 11 through 14, column 1. On the other hand, independent claim 1 explicitly recites that “a plurality of double-headed pistons” are provided “for compressing the gas.” Similarly, independent claim 19 explicitly recites “[a] double-headed piston type compressor ... for compressing gas” in the preamble. Since the above described purposes are fundamentally different, one of ordinary skill in the art would not have any motivation to combine the irrelevant disclosure relating to the uncompressed water of Parrot with the compressor for compressing gas in the current invention. Thus, it is also inappropriate to combine the Parrot reference with the Takeshi reference.

Other cited references including Fukanuma, Oshima, Kato and Ikeda also fail to teach the above described patentable features of the newly amended independent claims. In fact, the Examiner has cited these secondary and tertiary prior art references to allegedly disclose, teach or suggest the further limitations of dependent claims. For this reason, the detailed description of these references is not provided in the current response.

Based upon the above reasons, the Parrot reference should not have been combined with the Takeshi reference. Furthermore, even if these references are combined for the same of arguments, the combined disclosures still fail to teach, disclose or suggest the patentable features of newly amended independent claims. Therefore, it would not have been obvious to one of ordinary skill to provide the patentable features of the current invention as explicitly recited in newly amended independent claims 1 and 19.

Dependent claims 2 through 18 and 20 and 23 ultimately depend from newly amended independent claims 1 or 19 and incorporate the patentable features of the current invention. Therefore, the Applicant respectfully submits to the Examiner to withdraw the rejections of claims 1 through 23 under the section 103.

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**PATENT**

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**Amendment dated December 6, 2007**

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**Conclusion**

In view of the above amendments and the foregoing remarks, Applicant respectfully submits that all of the pending claims are in condition for allowance and respectfully request a favorable Office Action so indicating.

Respectfully submitted,

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